

**Fisher, Brian; Sessa, Salvatore**

**On a fixed point theorem of Greguš.** (English) [Zbl 0597.47036](#)

*Int. J. Math. Math. Sci.* 9, 23-28 (1986).

Let  $T$  and  $I$  be weakly-commuting mappings of a closed convex subset  $C$  of a Banach space  $X$  into  $C$  satisfying the inequality  $\|Tx - Ty\| \leq a\|Ix - Iy\| + (1 - a) \max\{\|Tx - Ix\|, \|Ty - Iy\|\}$  for all  $x, y$  in  $C$ , where  $0 < a < 1$ . It is proved that if  $I$  is linear and non-expansive in  $C$  and such that the range of  $I$  contains the range of  $T$ , then  $T$  and  $I$  have a unique common fixed point in  $C$ .

**MSC:**

[47H10](#) Fixed-point theorems

[54H25](#) Fixed-point and coincidence theorems (topological aspects)

Cited in **12** Reviews  
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**Keywords:**

weakly-commuting mappings of a closed convex subset; unique common fixed point

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